KATHMANDU UNIVERSITY

COMP 342

Report on

"2D-BREAKOUT GAME"

Submitted To:

Mr. Dhiraj Shrestha
Department of Computer Science and Engineering

Submitted by:
Bibek Neupane
Roll no :63

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Acknowledgment

I wish to express our sincere appreciation to the Department Of Computer Science And Engineering for including the COMP 342 mini project into our curriculum. We acknowledge and show appreciation to all who have facilitated us to complete this project. We enjoyed the duration of the work studying different modules and creating this report. Sharing of the ideas has been the most vital triumph during the development of this project.

First of all, we would like to express our heartfelt gratitude towards **Mr. Dhiraj Shrestha, course instructor of our project** for letting us carry out this project. His encouraging words and working techniques have made this project a successful one. On this opportunity, we would like to thank all those individuals who directly or indirectly helped us in making this project a successful one be it by encouraging us throughout the project or else through their valuable suggestions which we have tried our best to assimilate within our work.

ABSTRACT

This mini-project has given an idea about the computer graphics along with the area of it use. For this mini project I have used Javascript(P5) as the library . P5 is an library of javascript which provides a basic idea about how things work on graphics. The 2D-Breakout is an game where user control the board and ball collapse the brick it strike on. The user have 4lives, where he can try to collapse all brick by striking the ball to the bricks.The animation used is 2D.

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Introduction

A 2D-Breakoutgame is a 2D game where player tries to collapse all the brick by hitting it with the ball that bounce back and forth.The game player have 4 lives where he continously tries to break the block and if he/she successed to collapse every brick , came out a winner.

Objectives:

The main objectives of this project is to develop a 2D-Breakout Games using P5 java-script.

Our main objectives are:

* Creating a project that provides idea about computer graphics.

* Provide the game animation using java-script.

Tools used:

1) Sublime text : Sublime Text is a proprietary cross-platform source code editor with a Python application programming interface (API).
2) Java-script Library: Java-script enviroment and use of p5 in graphics design was the cruical part for the project development.

Language used

1) Java-script : Javascripts an interpreted high-level programming languag..It supports multiple programming paradigms, including object-oriented, imperative, functional and procedural, and has a large and comprehensive standard library.
Java-script is meant to be an easily readable language. Its formatting is visually uncluttered, and it often uses English keywords where other languages use punctuation.

2) P5: It is the library used for this project. The p5module provides turtle graphics primitives, in both object-oriented and procedure-oriented ways. It is simple to code and understand. It helps the beginners to understand the basic of graphics. P5module in graphics can be used for making game and animations.

Description

A brief explanation about how this project is going to works is shown. They are:

1) When the user hits the block with the ball the ball gets disappeared
2) If the ball by-pass the board at bottom , then lives is decreased
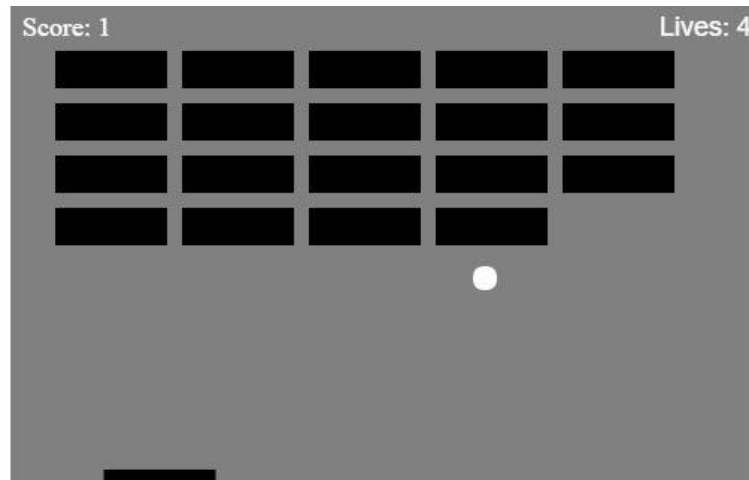3) The player has 4 lives in once
4) They can win by breaking all blocks

Fig: 2D-Breakout Game

Conclusion

I hope to produce a practical implementation of the concepts of game animation and graphics use in game development. I will try to achieve features in the project that will provide a clearer view about computer graphics.

References

1) https://p5js.org/get-started/
2) https://www.youtube.com/watch?v=8j0UDiN7my4